Amendments to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.(currently amended) A chemical compound or composition comprising a peptide, wherein

(a) said ~~which~~ peptide comprises a β-strand-forming section of peptide consisting of four to sixteen consecutive α-D-amino-acid residues and encompassing at least 50% of said peptide;~~which forms a β-strand having two edges, a first edge which associates with a target β-strand formed by a separate peptide-containing molecule, and a second edge, wherein the β-strand-forming section of peptide comprises a sequence of at least four consecutive α-D-amino-acid residues all of which sterically permit the β-strand-forming section of peptide to form a β-strand, and at least one of which is an Nα-substituted α-D-amino-acid residue, and any two successive Nα-substituted α-D-amino-acid residues are separated by an odd number of consecutive Nα-unsubstituted α-D-amino-acid residues, such that the Nα-substituent(s) lie along only the said second edge~~

(b) each of the consecutive α-D-amino acid residues in said β-strand-forming section of peptide has a side chain;

(c) said β-strand-forming section of peptide forms a β-strand having a peptide backbone which takes on the form of an extended ribbon having two edges, a first edge and a second edge, such that the NH and CO components of successive α-D-amino acid residues lie along the alternate edges of the ribbon;

(d) at least one of the Nα-atoms within the peptide backbone of the β-strand is Nα-substituted with an Nα-substituent, such that one or more Nα-substituent lie along only the second edge and sterically hinders the association of the second edge with another β-strand; and

(e) the first edge remains free of Nα-substituents, and is not prevented from associating with a target β-strand formed by a separate peptide-containing molecule.

2. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein no two successive Nα-substituted α-D-amino acid ~~amino-acid~~ residues in the β-strand-forming section of peptide are separated by more than 3 consecutive Nα-unsubstituted α-D-amino acid ~~amino-acid~~ residues.

3. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the successive Nα-substituted α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide are separated from each other by single Nα-unsubstituted α-D-amino acid ~~α-D-amino-acid~~ residues, such that the β-strand-forming section of peptide comprises an alternating sequence of Nα-substituted and Nα-unsubstituted α-D-amino acid ~~α-D-amino-acid~~ residues.

4. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the Nα-substituent of each Nα-substituted α-D-amino acid ~~α-D-amino-acid~~ residue in the β-strand-forming section of peptide sterically allows or promotes the β-strand-forming section of peptide to form a β-strand, and sterically hinders the association of ~~the~~ said second edge of that β-strand with any other ~~another~~ β-strand.

5. (currently amended) The ~~A~~ chemical compound or composition according to claim 4, wherein the Nα-substituent of each Nα-substituted α-D-amino acid ~~α-D-amino-acid~~ residue in the β-strand-forming section of peptide is selected from the group consisting of:

a fluorine atom or an OH group;

a group that is connected to the Nα atom by an oxygen atom within it;

a group that is connected to the Nα atom by a CH_2 subgroup within it;

a methyl or ethyl group, or some other alkyl or aliphatic group;

a substituted or unsubstituted benzyl group, or some other arylmethyl group;

an acetylated or acylated 2-hydroxy-4-methoxybenzyl (AcHmb) group; and

an acylated or unacylated 2-hydroxybenzyl (AcHb/Hb) group.

6. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of each α-D-amino acid ~~α-D-amino-acid~~ residue in the β-strand-forming section of peptide allows or promotes the β-strand forming section of peptide to form a β-strand.

7. (currently amended) The ~~A~~ chemical compound or composition according to claim 6, wherein the side chain of one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide is that of an amino acid ~~amino-acid~~ residue having a β-sheet propensity of greater than 1.00.

8. (currently amended) The ~~A~~ chemical compound or composition according to claim 6, wherein the side chain of any one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of the peptide is selected from the group consisting of:

an atom or group that allows or promotes the β-strand-forming section of the peptide to associate as a β-strand with the target β-strand and thereby form a stable β-sheet complex; and

an atom or group that forms a hydrophobic or electrostatic interaction, hydrogen bond, or other favourable non-covalent interaction with the neighbouring side chain of the target β-strand in a β-sheet complex comprising the target β-strand and the β-strand-forming section of peptide.

9. (currently amended) The ~~A~~ chemical compound or composition according to claim 6, wherein the side chain of any one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide is selected from the group consisting of:

a hydrophobic group, or a group that has a considerable hydrophobic portion;

a branched or unbranched alkyl or aliphatic group;

a group that is branched at its connecting β-carbon atom;

an aromatic group;

an acidic or basic group; and

an amide- or hydroxyl-containing group.

10. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide hinders ~~the~~ stacking of β-sheets.

11. (currently amended) The ~~A~~ chemical compound or composition according to claim 10, wherein the side chain of one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide extends beyond the neighbouring side chains in the β-strand.

12. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide contains a detectable group which allows the compound or composition to be traced or detected.

13. (currently amended) The ~~A~~ chemical compound or composition according to claim 12, wherein the side chain of one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide is selected from the group consisting of:

an atom or group that contains a radioactive or magnetically active nucleus;

that of phenylalanine or tyrosine with one or more radioactive or magnetically active iodine or other halogen atoms substituted onto the aromatic ring;

a fluorescent, coloured, or other spectroscopically detectable group;

a group which contains an unpaired electron and thereby acts as a spin label;

a group which contains the 2,2,5,5-tetramethyl-1-pyrrolidinyloxy (PROXYL) group; and

a group which contains the 2,2,6,6-tetramethyl-1-piperidinyloxy (TEMPO) group.

14. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of one or more α-D-amino acid ~~α-D-amino-acid~~ residues in the β-strand-forming section of peptide is selected from the group consisting of the side chain of:

any naturally occurring α-L-amino acid ~~α-L-amino-acid~~ or synthetic derivative thereof; ~~glycine;~~ alanine; serine; cysteine; threonine; valine; leucine; isoleucine; methionine; phenylalanine; tyrosine; tryptophan; glutamine; asparagine; glutamate; aspartate; histidine; lysine; arginine; and

tert-leucine or β-hydroxyvaline.

15. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the target β-strand is formed by the Alzheimer's Aβ peptide, and the β-strand-forming section of peptide binds specifically as a β-strand to part or all of the KLVFFAE sequence of SEQ ID NO: 5 within the target β-strand in the parallel orientation, thereby forming a parallel β-sheet complex wherein consecutive residues of the β-strand-forming section of peptide lie diagonally opposite consecutive residues of the KLVFFAE sequence in the same order.

16. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the target β-strand is formed by the Alzheimer's Aβ peptide, and the β-strand-forming section of peptide binds specifically as a β-strand to part or all of the KLVFFAE sequence of SEQ ID NO: 5 within the target β-strand in the antiparallel orientation, thereby forming an antiparallel β-sheet complex wherein consecutive residues of the β-strand-forming section of peptide lie diagonally opposite consecutive residues of the KLVFFAE sequence in reverse order.

17. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide is preceded by, or followed by, or otherwise attached to a distinct membrane-penetrating section of peptide which enables the β-strand-forming section of peptide to cross ~~biological barriers such as~~ cell membranes, ~~and~~ the blood-brain barrier or any other biological barrier.

18. (currently amended) The ~~A~~ chemical compound or composition according to claim 17 wherein the side chain of each residue in the membrane-penetrating section of peptide is selected from the group consisting of:

a basic or hydrophobic group; and a side chain of alanine, valine, leucine, isoleucine, methionine, phenylalanine, tyrosine, tryptophan, proline, histidine, lysine, or arginine.

19. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide has a free or acylated N terminus and a free, or amidated, or esterified C terminus, or forms part of a larger peptide which has a free or acylated N terminus and a free, amidated, or esterified C terminus.

20. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide is attached to another functional component.

21. (currently amended) The ~~A~~ chemical compound or composition according to claim 20, wherein the functional component is selected from the group consisting of:

a component which strengthens the binding of the β-strand-forming section of peptide to the target β-strand;

a component which enhances specificity of association of the β-strand-forming section of peptide with the target β-strand;

a component which enables the β-strand-forming section of peptide to cross ~~biological barriers such as~~ cell membranes, ~~and~~ the blood-brain barrier and other biological barrier;

a component which causes the compound/composition to target specific organs, cells, or molecules;

a component which allows the compound/composition to be traced or detected;

an atom or group that contains a radioactive or magnetically active nucleus;

a fluorescent, coloured, or other spectroscopically detectable group;

a group which contains an unpaired electron and thereby acts as a spin label;

a group which contains the 2,2,5,5-tetramethyl-1-pyrrolidinyloxy (PROXYL) group or the 2,2,6,6-tetramethyl-1-piperidinyloxy (TEMPO) group;

a solid matrix, resin, or support;

an enzyme, hormone, antibody, transcription factor, or other protein molecule;

a group that binds specifically to a particular protein; and

a cytotoxic molecule.

22. (currently amended) The ~~A~~ chemical compound or composition according to claim 20, wherein attachment of the β-strand-forming section of peptide to the functional component is by means of: an amide or ester linkage formed with the C-terminus of the β-strand-forming section of peptide; ~~C-terminal carboxyl group or N-terminal amino group of the full peptide~~ or an amide linkage formed with the N-terminus of the β-strand-forming section of peptide; or an amide linkage formed ~~, or~~ with a carboxyl, or amino~~, or hydroxyl~~ group of a side chain within the β-strand-forming section of the ~~full~~ peptide; or an ester linkage formed with a carboxyl or hydroxyl group of a side chain within the β-strand-forming section of peptide; or ~~, or by means of~~ a disulphide bridge formed with a thiol group of a side chain within the β-strand-forming section of the ~~full~~ peptide.

23. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide comprises between 5 and 10 amino acid ~~amino-acid~~ residues and/or includes a sequence of side chains of amino acid residues of the β-strand-forming section of the peptide that is homologous to or identical to the amino-acid sequence FFVLK of SEQ ID NO: 3 ~~(SEQ. ID. NO. 3)~~.

24. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide associates with a target β-strand comprising the amino-acid sequence KLVFF of SEQ ID NO: 1 ~~(SEQ. ID. NO. 1)~~.

25. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 comprising one or more components which mimic the structure and action of said β-strand-forming section of the peptide, ~~in addition to or instead of said β-strand-forming section of peptide,~~ wherein the components which mimic the structure and action of the β-strand-forming section of the peptide are formed by replacing one or more of the backbone peptide groups or side-chain groups of amino acid residues of the β-strand-forming section of the peptide by another chemical group of similar stereochemistry and ability to form favourable non-covalent interactions with the target β-strand.

26. (currently amended) The ~~A~~ chemical compound or composition according to claim 25 wherein:

(a) one or more of the Nα-unsubstituted backbone peptide groups (CONH) of the β-strand-forming section of peptide is/are each replaced by any ~~one~~ of the following groups: CSNH (thioamide); COO (ester); CSO or ~~,~~ COS~~, CSS~~ (thioester); CSS (dithioester); $COCH_2$ (ketone); $CSCH_2$ (thioketone); SO_2NH (sulphonamide); $SOCH_2$ (sulphoxide); SO_2CH_2 (sulphone); SO_2O (sulphonate); and/or ~~wherein~~

(b) one or more Nα-substituted ~~N-substituted~~ backbone peptide groups (CON(R)) of the β-strand-forming section of peptide is/are replaced by

one of the following ~~an~~ N- or C-substituted ~~form of one of the following~~ groups: CSN(R) ~~CSNH~~ (thioamide); COCH(R) ~~$COCH_2$~~ (ketone); CSCH(R) ~~$CSCH_2$~~ (thioketone); $SO_2N(R)$ ~~SO_2NH~~ (sulphonamide); SOCH(R) ~~$SOCH_2$~~ (sulphoxide); $SO_2C(R)$ ~~SO_2CH_2~~ (sulphone), wherein R is equivalent to the original Nα-substituent; and/or

(c) ~~wherein~~ one or more of the side chains of the β-strand-forming section of peptide is/are each replaced by another group having ~~similar~~ stereochemistry or arrangement of polar and non-polar atoms, similar to that of the replaced side chains, maintaining those particular features which are essential for association with the target β-strand.

27 - 40 (cancelled)

41. (previously presented) A pharmaceutical compound or composition according to claim 1.

42 - 44 (cancelled)

45. (new) The chemical compound or composition according to claim 1, wherein any two successive Nα-substituted α-D-amino acid residues are separated by an odd number of consecutive Nα-unsubstituted α-D-amino acid residues.